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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/539,032

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EXAMINER

CLOW, LORI A

ART UNIT

PAPER NUMBER

1631

NOTIFICATION DATE

DELIVERY MODE

12/04/2007

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartere@kmob.com
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Office Action Summary

Application No.

09/539,032

Applicant(s)

BRAHMACHARI ET AL.

Examiner

Lori A. Clow, Ph.D.

Art Unit

1631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Applicants' response, filed 18 September 2007, has been fully considered. Rejections and/or objections not reiterated from previous office actions are hereby withdrawn. The following rejections and/or objections are either reiterated or newly applied. They constitute the complete set presently being applied to the instant application.

Claims 1-4 and 6-9 are currently pending. Claims 5 and 10-12 have been cancelled.

Drawings

It is noted that the drawings submitted 2 February 2001 are accepted.

Claim Objections

Claim 4 is objected to because of the following informalities: The listing of sequences in claim 4 is currently out of order. Due to the amendment to claim 4, incorporating "and" after sequence number 66 (SEQ ID NO: 66), sequence number 34 (SEQ ID NO: 34) was pushed to the following page and appears to now out of sequence order in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Bruccoli et al. (Nucleic Acids Research (1998) vol. 26, no. 19, pages 4482-4486). This is a new grounds of rejection.

Instant claim 1 is essentially drawn to a computer-based method of identifying conserved peptide motifs useful as drug targets comprising generating overlapping peptide sequences from pathogenic organisms of length N; sorting the peptide sequences to produce matched common peptides; locating matched common peptide sequences in their corresponding protein sequences to gather location and labeling origin and location; joining overlapping common sequences; and comparing extended conserved sequences to a host organism protein sequence to determine which of the conserved peptides are not present in the host.

Bruccoli et al. teach a method of concordance analysis of microbial genomes in which a set of proteins are computationally analyzed to determine concordance of putative gene products that show sets of proteins conserved across one set of user specified genomes and not present in another set of user specified genomes (abstract). The system uses a relational database to store protein coding regions from different genomes and to store the results of a complete comparison of all sequences against sequences using FASTA. A display, using CLUSTALW can be performed for all related proteins for a given sequence (abstract). Bruccoli teaches the generation of overlapping sequence alignments from pathogenic organisms (page 4483, Table 3); homolog matching (page 4483, column 1); target sequence CLUSTALW alignment for all sequences (page 4483, column 2); an alignment of just matching gene product against the corresponding gene product in the target; and exclusion criteria. Therefore, Bruccoli et al. teach the limitations of claim 1.

In regard to claim 2, Bruccoli teaches a genome of at least 4 (sequence length) (page 4483, Table 3 teaches the *E. coli* genome. The *E. coli* genome contains 4,289 encoded proteins.

In regard to claim 3, Bruccoli teaches the selected pathogenic organism that includes at least *M. tuberculosis* (page 4483, Table 3).

In regard to claim 4, Bruccoli teaches the *M. tuberculosis* genome at Table 3, therefore, it inherently comprises the DNA gyrase subunit of SEQ ID NO: 67 (VRKRPGMYIG) (as seen in GenBANK Accession number YP 001285950; amino acids 65-74).

In regard to claim 6, Bruccoli teaches the *M. tuberculosis* genome at Table 3, therefore, it inherently comprises DNA gyrase subunit B, as noted above.

In regard to claim 7, Bruccoli teaches selecting organism names from a menu (page 4483, Table 2).

In regard to claim 8, Bruccoli teaches selecting protein sequences and labeling them with an id number, a location and a name (page Table 3 and Table 4).

In regard to claim 9, Bruccoli teaches determining overlapping sequences (CLUSTALW; page 4483, col. 2).

As Bruccoli anticipates each of claims 1-3 and 6-9, no claims are allowed.

Prior Art Made of Record

The following prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Galperin et al. (Current Opinion in Biotechnology (1999) Vol. 10, pages 571-578.

2. Gray et al. (CMLS (1999) Vol. 56, pages 779-787.
3. Hobohm et al. (Journal of Molecular Biology (1995) Vol. 251, pages 390-399.
4. Rosamond et al. (Science (2000) Vol 287, pages 1973-1976.

Conclusion

The prior rejections under 35 USC 101 (non-statutory subject matter) have been withdrawn in view of the claim amendments adding “communicating said conserved peptide sequences from said selected pathogenic organisms not present in said host to a user”.

“Communicating...to a user” is deemed to provide a concrete, tangible and useful result.

Support for the amendment can be found in the specification at page 10.

The previous rejections under 35 USC 112, 2nd paragraph have been withdrawn in view of the amendments to the claims.

Inquiries

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993) (See 37 CFR § 1.6(d)). The Central Fax Center Number is (571) 273-8300.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lori A. Clow, Ph.D., whose telephone number is (571) 272-0715. The examiner can normally be reached on Monday-Friday from 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Marjorie Moran can be reached on (571) 272-0720.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to (571) 272-0547.

Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO’s Patent Electronic Business Center (Patent EBC) for assistance. Representatives are

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available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

LORI A. CLOW, PH.D.
PRIMARY EXAMINER



November 20, 2007
Lori A. Clow, Ph.D.
Primary Patent Examiner
Art Unit 1631